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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/648,644	08/25/2000	Nischal Abrol	PA000347	5628

23696 7590 02/09/2005

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

JUNG, MIN

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/648,644

Applicant(s)

ABROL ET AL.

Examiner

Min Jung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanerva et al., US Pat. 5,930,233 (Kanerva).

Kanerva discloses a data transmission system with sliding window data flow control. Specifically, regarding claims 1, 5, and 12, Kanerva teaches a method and system for detecting delayed Radio Link Protocol frames, and preventing the transmission of unnecessary Negative Acknowledgement messages and data frame retransmission (see Abstract and col. 6, lines 27-31), comprising the steps of : buffering an unsequentially received Radio Link Protocol frame (col. 8, lines 22-27, Kanerva teaches that the unsequentially received frame is added to the list of unacknowledged frames); and withholding the transmission of a Negative Acknowledgement message for a delayed Radio Link Protocol frame until the delayed Radio Link Protocol frame has been missing longer than a predefined time period (col. 6, lines 32-37, and col. 8, lines 30-34).

The current amendment adds the limitation "monitoring the first channel and second channel for the delayed Radio Link Protocol frame, wherein the first and second

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channel are code-multiplexed to allow concurrent transmission of frames". This limitation, in essence, limits the invention to be implemented in a CDMA environment. Kanerva teaches that his invention "may be employed in all digital data transmission systems using sliding-window flow control....." at col. 4, lines 15-19. Kanerva specifically teaches that his invention "is especially suited for data transmission applications in digital mobile communication systems of the TDMA or CDMA type," at col. 4, lines 20-27. Kanerva, however, describes his invention by using the GSM mobile communication system (TDMA) as an example without being limited to it (col. 4, lines 28-30). Therefore, although the specific step of monitoring the code multiplexed channels for the delayed RLP frame is lacking from Kanerva's teaching (because the system that Kanerva used in explaining his invention is a TDMA system), Kanerva teaches all the ingredients to implement his system using CDMA access method. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to implement the method and apparatus taught by Kanerva by applying delayed RLP frame monitoring step for code-multiplexed channels to make the example system detailed in Kanerva to be also functional in CDMA environment.

Regarding claims 2 and 6, Kanerva further teaches timer/counter in association with the buffered Radio Link Protocol frame for determining the necessity of transmitting a Negative Acknowledgement message for an unreceived Radio Link Protocol frame (the delay D, or the duration of D).

Regarding claims 4 and 8, the step of delaying updating is inherent in Kanerva. Kanerva waits for the delayed frame to arrive. Kanerva also teaches the sequence

number and the missing sequence number in the received frames (see col. 5, lines 53-57, and col. 6, lines 8-21). Therefore, the sequence number update after the delayed frame arrives would be an inherent feature in Kanerva.

Regarding claims 9-11, Kanerva teaches the implementation of the disclosed scheme in GSM mobile communication system as shown in Fig. 1, and as described in col. 4, line 38 – col. 5, line 35. It is inherent that the described function can be implemented in any of the network devices including base station, or mobile terminals including a mobile telephone, or a mobile data terminal.

Regarding claims 3 and 7, Kanerva fails to teach the feature of buffering the Negative Acknowledgement. Kanerva is silent on whether the Negative Acknowledgement is buffered at all. However, it would have been obvious for one of ordinary skill in the art at the time of the invention either to generate the Negative Acknowledgement after the delay D expires, or to generate it and buffer it until the expiration of D to be transmitted subsequent to the expiration of D.

Response to Arguments

3. Applicant's arguments filed November 23, 2004 have been fully considered but they are not persuasive. The limitation added by the Amendment has been addressed in the above paragraph #2. Since monitoring the channels is an inherent step when the steps are performed to wait for frames, receive frames, determine whether or not the received frame is the last frame (Fig. 3), and the teaching of a system using code-multiplexed channel scheme (CDMA) is evident in Kanerva, Kanerva clearly suggest the

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first and second channel that are code-multiplexed to allow simultaneous transmission of frames.


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Min Jung whose telephone number is 571-272-3127.

The examiner can normally be reached on Monday, Thursday, Friday 7:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
February 6, 2005


Min Jung
Primary Examiner